PS-LX33/33B/33C/33(A)



PS-LX33 AEP Model UK Model PS-LX33C US Model PS-LX33(A) UK Model PS-LX33B AEP Model

Photo: PS-LX33C

The PS-LX33C is supplied with a VL-5 cartridge, while the PS-LX33, PS-LX33B, PS-LX33(A) is supplied with a XL-150 cartridge. The PS-LX33(A) is not supplied with a dust cover.

STEREO TURNTABLE SYSTEM

SPECIFICATIONS

Turntable

Platter

30.4 cm (12 in.), aluminum-alloy diecast Linear torque BSL (brushless and slotless)

Motor motor

Drive system Direct drive

Control system FG servo control system

Speed

331/3 rpm, 45 rpm

Starting characteristics Comes to nominal speed within

2/3 revolution (331/3 rpm)

Wow and flutter

0.04% (WRMS)* 0.045% (WRMS)

± 0.055% (DIN)

Signal-to-noise ratio 75 dB (DIN-B)

Automatic system

Lead-in, return, reject, repeat

* This new measuring method concerns only the turntable assembly, including the platter. It excludes wow and flutter caused by the tonearm, the cartridge, or the record. Measured by obtaining signal from magnetic pick-up

Tonearm

Statically balanced Type Pivot-to-stylus length 216.5 mm (85/8 in.) Overhang 16.5 mm (21/32 in.) Tracking force adjustment range 0 - 3 g

Cartridge shell weight

Cartridge weight range (including cartridge shell)

7.5 – 12 g

- Continued on page 2 -



SERVICE MANUAL

Cartridge VL-5 (PS-LX33C)

Moving magnet type Frequency response 10 Hz to 20 kHz Channel separation 20 dB at 1 kHz

Output voltage

3.5 mV at 1 kHz, 5 cm/sec.

Load impedance

47 to 100 kilohms 1.5 to 2.5 g (2 g recommended)

Tracking force Stylus

Sony ND-5G

(conical 0.6 mil diamond)

Weight

5.0 g

Cartridge XL-150 (PS-LX33, PS-LX33B, PS-LX33 (A))

Frequency response 10 Hz to 25 kHz

Moving magnet type 20 dB at 1 kHz

Channel separation Output voltage

3 mV at 1 kHz, 5 cm/sec., 45°

Load impedance

50 to 100 kilohms 1.3 to 2.3 g (1.8 g recommended)

Tracking force Stylus

Sony ND-150G (conical 0.6 mil diamond)

Weight

8.8 g

General

Power requirements US model:

120 V ac, 60 Hz AEP model: 220 V ac, 50/60 Hz

UK model: 240 V ac, 50/60 Hz

Power consumption 8 W

Dimensions

Approx. $430 \times 110 \times 355$ mm (w/h/d)

 $(17 \times 4^3/8 \times 14 \text{ in.})$

including projecting parts and controls

Weight

Approx. 4.9 kg (10 lbs 13 oz), net

Approx. 6.2 kg (13 lbs 11 oz), in shipping

carton

FEATURES

Automatic turntable system

Automatic lead-in, return, reject and repeat functions are activated by merely pushing the buttons.

Linear torque BSL motor

Direct drive system with Sony's unique BSL (brushless and slotless) motor which has an extremely low noise level, and whose smoothness virtually eliminates wow and flutter. The motor's high torque assures a quick attainment of 331/3 rpm after only 2/3 revolu-

Low-mass tonearm and cartridge

The low-mass tonearm and cartridge allow the stylus to track with greater accuracy.

Resilient feet

The turntable has resilient feet that isolate the mechanism from external shock and vibration.

Disc centering guides

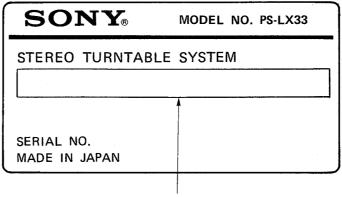
Disc centering guides facilitate placing a 30 cm record over the center spindle.

Easily-adjusted tracking force (PS-LX33, PS-LX33B, PS-LX33 (A))

Using the supplied tracking force setting guide, it is easy to position the counterweight so that the precise tracking force for the supplied cartridge will be applied.

MODEL IDENTIFICATION

Specification Label



US model: AC 120V 60Hz 8W \sim 50/60Hz AEP model: AC 220V 8W UK model: AC 240V ~ 50/60Hz 8W

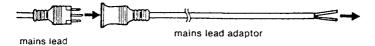
SECTION 1 OUTLINE

1-1. OUTLINE

For the Customers in the UK model

The mains lead plug of your unit is a 3-pin type especially designed to be connected only to the Sony amplifier such as the TA-AX22 or the TA-AX44. These components have receptacles on the rear to receive this plug to supply mains power to other components of your audio system.

To connect the unit directly to a mains power point in your house, firmly insert the 3-pin plug into the supplied mains lead adaptor.



CAUTION-

Connect the 3-pin plug only to the mains outlet on the components mentioned above or to the supplied mains lead adaptor.

Important

The wires in the mains lead adaptor are coloured in accordance with the following code:

Blue: Neutral Brown: Live

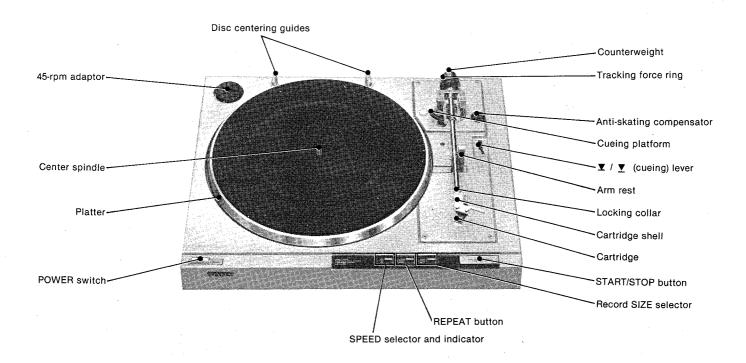
As the colours of the wires in the mains lead adaptor of this apparatus may not correspond with the coloured markings identifying

the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

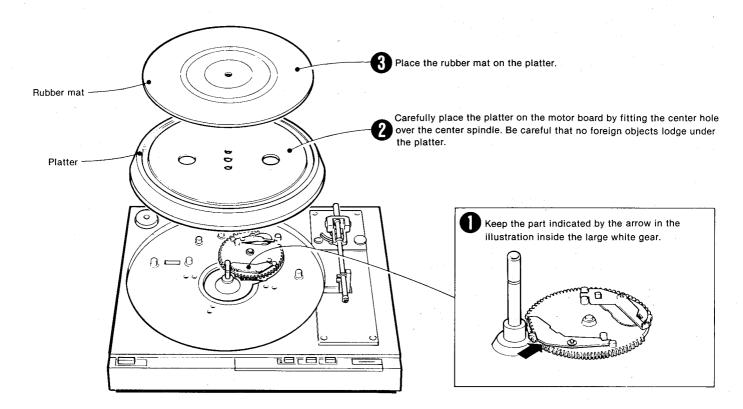
PARTS IDENTIFICATION

The photo below shows the assembled PS-LX33C turntable.



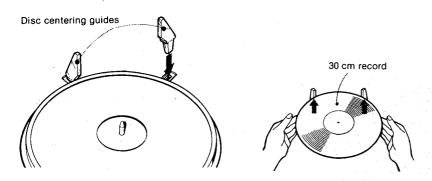
TURNTABLE ASSEMBLY

Do not connect the power cord or the connecting cords until the turntable has been completely assembled. Remove all packing material and wipe off the cabinet. Save the packing box and materials for possible future use. The numbers in the illustration refer to the sequence of assembly.



Disc centering guide installation

Insert the supplied disc centering guides as illustrated.



CARTRIDGE INSTALLATION

The supplied cartridge has been installed correctly on the cartridge shell at the factory. So the following procedures should be skipped unless you replace the cartridge.

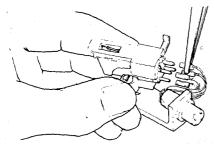
The weight range of the cartridge which can be mounted with the supplied cartridge shell is 2.3 to 6.8 g.

Connect the lead wires of the shell to the corresponding pins on the cartridge.

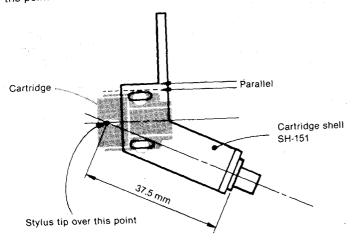
the cartridge.	Cartridge pins
Wires	
*****	White, L (Left

. White, L (Left channel signal) Blue, LE or G (Left channel ground) White. Red, R (Right channel signal)

. Green, RE or G (Right channel ground)



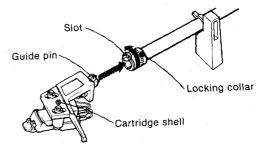
- 2 Temporarily install the cartridge into the cartridge shell with the supplied mounting screws.
- 1 Place the cartridge shell exactly over the diagram below and adjust the position of the cartridge so that the stylus tip is just over the point where the lines cross. Then tighten the screws down.



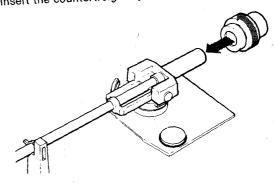
TONEARM ASSEMBLY

For the PS-LX33C

- Secure the tonearm to the arm rest.
- Plug the shell into the tonearm, fitting the guide pin on the shell with the upper slot of the tonearm. Turn the locking collar until the shell is firmly locked.

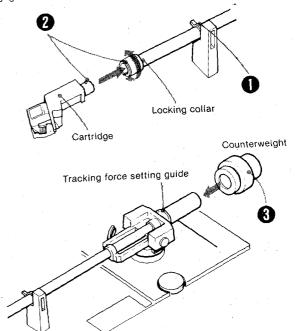


Insert the counterweight by turning it.



For the PS-LX33, PS-LX33(A), PS-LX33B

- Secure the tonearm to the arm rest.
- Plug the supplied cartridge into the tonearm and turn the locking collar counterclockwise until the cartridge is firmly locked.
- Olnsert the counterweight and screw it up to the tracking force setting guide.



TONEARM ADJUSTMENT

Notes

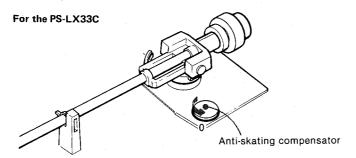
- The turntable must be on a level surface while the tonearm is being adjusted.
- Be careful not to damage the stylus tip while making adjustments.

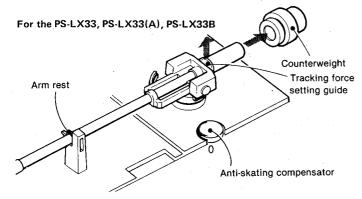
TONEARM BALANCE ADJUSTMENT

It is critically important for good sound reproduction that the stylus traces the record groove accurately and with the proper tracking force. To do this, the tonearm must first be balanced so that the proper tracking force can be applied.

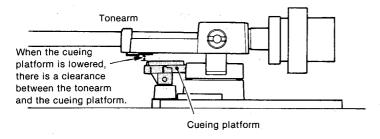
To balance the tonearm, proceed as follows:

- Secure the tonearm to the arm rest. (For the PS-LX33C)
- Secure the tonearm to the arm rest and remove the counterweight and the tracking force setting guide. (For the PS-LX33, PS-LX33(A), PS-LX33B)
- 2 Set the anti-skating compensator to "0".

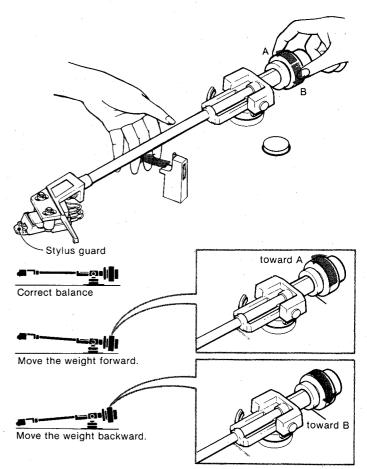




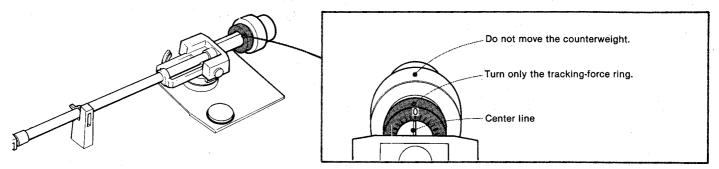
- Set the cueing lever to the ▼ position.
- Connect the power cord to an ac outlet and press the POWER switch (ON).
- Press the START/STOP button. This will cause the turntable to rotate and the cueing platform to lower. After the cueing platform has lowered, press the POWER switch again to turn the unit off and stop the turntable by hand.



- Remove the stylus guard and release the tonearm from the arm rest.
- ② Adjust the position of the counterweight by turning it. Release the tonearm gently and check the balance. Repeat this step until the arm is balanced.



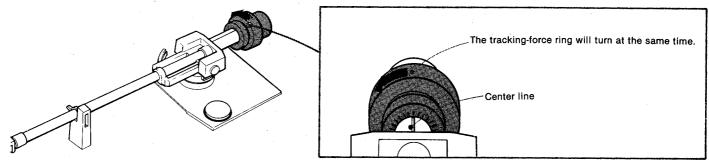
- After the tonearm is balanced, replace the stylus guard and secure the tonearm to the arm rest.
- **9** While making sure that the counterweight remains in the balanced position, carefully turn the tracking force ring until the "0" indication is aligned with the center line on the tonearm.



TRACKING FORCE* 1 ADJUSTMENT

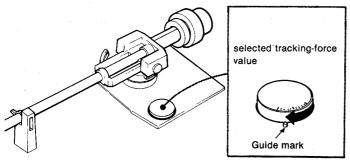
Turn the counterweight as illustrated so that the recommended tracking force for your cartridge is aligned with the center line on the tonearm. The maximum tracking force available is 3 grams.

- ●The recommended tracking force for the VL-5 cartridge (supplied only with the PS-LX33C) is 2 grams.
- The recommended tracking force for the XL-150 cartridge (supplied with the PS-LX33, PS-LX33B or PS-LX33(A)) is 1.8 grams.



ANTI-SKATING*2 COMPENSATION

Turn the anti-skating compensator so that the guide mark is aligned with the selected tracking force value.



When the adjustment is complete

Press the POWER switch. The turntable will start rotating. Then press the START/STOP button to lift the cueing platform and stop the turntable rotation.

*1 Tracking force

Tracking force is the vertical force applied to the stylus tip so that it can accurately trace a record groove.

The tracking force is applied after the tonearm is balanced.

Since the proper tracking force differs depending on which cartridge is installed, be sure to apply the tracking force recommended for your cartridge. If the tracking force is too light, the stylus will skip grooves. When it is too heavy, the stylus tip and the record will wear excessively. Note that if you play a record at a temperature below 10°C (50°F), or if the record to be played is badly warped, the tracking force should be increased by 20%.

*2 Anti-skating compensator

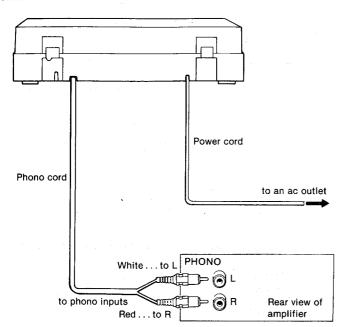
While the record is being played, friction between the record groove and the stylus produces a force that tends to drive the tonearm toward the center of the record.

The anti-skating compensator cancels this force. The anti-skating force should be the same value as the tracking force.

Incorrect adjustment of the anti-skating compensator results in sound distortion and uneven wear on both the stylus and the record.

CONNECTIONS

- Turn off the amplifier before making connections.
- Be sure to insert the cable connectors firmly into the jacks. Loose connections may cause hum and noise.
- Connect the red plug of the connecting cord to the right-channel jack [R] of the amplifier and the white plug to the left-channel jack [L]. Otherwise, the right and left channels will be reversed.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.

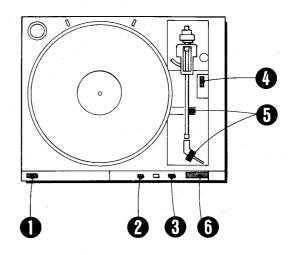


RECORD PLAYING

PREPARATION

- Place a record on the platter. For 17 cm (7 inch) records, put the supplied 45-rpm adaptor over the center spindle.
- Lower the amplifier volume and set the input selector to PHONO.

AUTO PLAY



- Press the POWER switch (ON).
- 2 Select the correct record speed.
- The indicator of the selected speed will be illuminated.
- 3 Select the correct record size.
- Set the cueing lever to the ▼ position.
- 6 Unlock the arm rest latch and remove the stylus guard.
- @ Press the START/STOP button. Play will begin.

When the tonearm reaches the end of the record, it will automatically return to the arm rest and the turntable will stop.

Note

After when the turntable has been subjected to strong vibration or shock, the record size selection may malfunction as follows.

- The tonearm may lower onto the platter even if the START/STOP button has not been pressed.
- The tonearm may lower on the point for a 17 cm record even if the 30 cm record size has been selected.

If this happens, press the START/STOP button to return the tonearm to the arm rest, and press the button again to restart play.

TO BEGIN RECORD PLAY AT A PARTICULAR POINT—Manual play

- 1 Press the POWER switch (ON).
- 2 Select the correct record speed.

The indicator of the selected speed will be illuminated.

- 3 Set the record SIZE selector to the 30 cm position.
- Set the cueing lever to the ▼ position.
- 6 Unlock the arm rest latch and remove the stylus guard.

Bring the tonearm to the point over the record at which you want to start play.

@ Press the START/STOP button. Play will begin.

When the tonearm reaches the end of the record, it will automatically return to the arm rest and the turntable will stop.

Note

If you bring the tonearm too near the record label while the turntable is rotating, the tonearm may return to the arm rest as a result of having activated the automatic return mechanism.

TO LIFT UP THE STYLUS DURING PLAY

To listen to another part of the record being played, or to lift up the stylus on a record for a brief moment and start playing from the same point, set the cueing lever to the ▼ position.

The tonearm will be lifted up. To lower it again, set it to the ▼ position.

TO STOP DURING PLAY

Press the START/STOP button. The tonearm will return to the arm rest and the turntable will stop rotating.

TO REPEAT PLAY

Press the REPEAT button after starting play. The tonearm continues repeat play unless the button is pressed again to turn off the repeat function. To stop during repeat play, press the REPEAT button to release it, then press the START/STOP button.

(If you press the REPEAT button in the stop mode, the tonearm will lower onto the platter even if the START/STOP button has not been pressed.)

REPLACING THE STYLUS

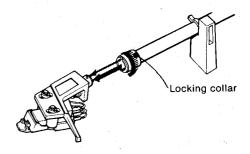
For the PS-LX33C

The stylus will lose its effectiveness and begin to damage records after about 400 hours of use.

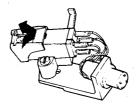
For the VL-5 cartridge (supplied with the PS-LX33C), an ND-5G replacement stylus is available at your Sony dealer. Handle the stylus carefully as it is very delicate.

Install the replacement stylus as follows.

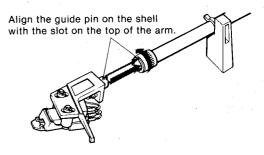
- 1 Lower the sound level or turn the amplifier off.
- ② Secure the tonearm to the arm rest and separate the cartridge shell from the tonearm by turning the locking collar in the direction of the arrow.



Detach the stylus assembly by grasping it between the thumb and forefinger and pulling gently in the direction of the arrow.



- 4 Insert the new stylus into the cartridge.
- Plug the cartridge shell into the tonearm and turn the locking collar counterclockwise until the shell is locked.

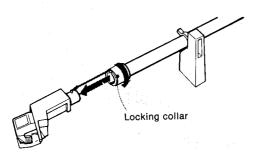


For the PS-LX33, PS-LX33(A), PS-LX33B

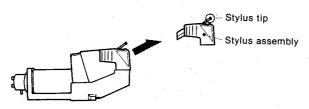
The stylus will lose its effectiveness and begin to damage records after about 400 hours of use.

An ND-150G replacement stylus is available at your Sony dealer. Handle the stylus carefully as it is very delicate. Install the replacement stylus as follows.

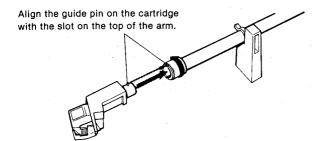
- 1 Lower the sound level or turn the amplifier off.
- ② Secure the tonearm to the arm rest and separate the cartridge from the tonearm by turning the locking collar in the direction of the arrow



Obtach the stylus assembly by grasping it between the thumb and forefinger and pulling gently in the direction of the arrow.

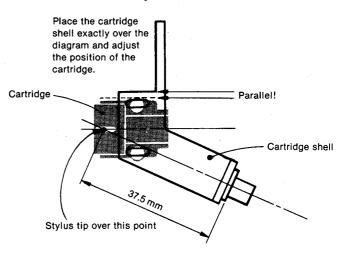


- Insert the new stylus into the cartridge.
- Plug the cartridge into the tonearm and turn the locking collar counterclockwise until the cartridge is locked.



INSTALLING A CARTRIDGE OTHER THAN THE ONE SUPPLIED

Since the cartridge supplied with this turntable is unifed with the shell, if you want to use a different cartridge, you will need an appropriate cartridge shell (Sony SH-151, 5.2 g). The total weight of the cartridge and shell must be between 7.5 grams and 12 grams. Connect the lead wires of the shell to the corresponding pins on the cartridge and install the cartridge in the shell as illustrated. For details on the connection of the lead wires, refer to the instruction manuals of the cartridge and shell.



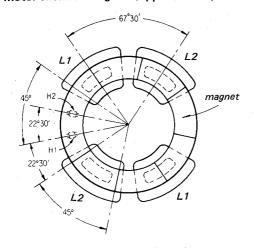
After installing the new cartridge and shell, adjust the tonearm's balance, tracking force and anti-skating compensation as follows.

1-2. CIRCUIT DESCRIPTION

MOTOR

The method for detecting change in turntable rotation speed for the BSL (Brushless and Slotless) DC servo motor on this set is different from the conventional method (detection by MG head fixed to the frame). On this set it is performed by the FG board fixed to the stator.

Motor Internal Diagram (upper surface)



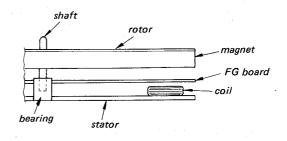
For this purpose, 256 poles of magnetication (SN alternately) are shallowly layered on the surface of the drive magnetizer (8 poles alternately SN) on the magnet used to rotate the rotor.

The frequencies detected at the FG board are:

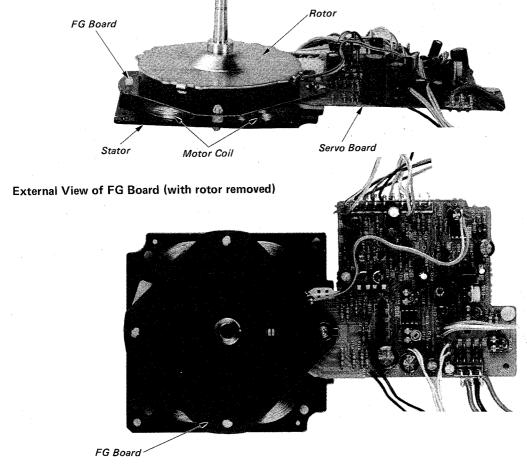
 $33\,\%$ rpm 71.1 Hz

45 rpm..... 96.0 Hz

(cross-section)



Motor External View



ELECTROMOTANCE GENERATED ON FG BOARD

On the FG board, if the radial pattern (a) in Figure 1 is considered as one conductor, when the rotor rotates, the conductor cuts the magnetic flux, electromotance is generated on the conductor, and its direction changes from the Fleming's right-hand rule to that in Figure 1.

Overall, the spacing of the radial pattern on the FG board and the rotation speed detection sine-wave magnet peak is the same, so the electromotance generated in all of the patterns is directed in a uniform direction as shown in Figure 2 if the pattern is considered as one loop.

Therefore, the electromotance generated on the FG board is equivalent to 256 times that generated on the one pattern (circular integral method).

The frequencies detected on the FG board are obtained as follows.

For one radial pattern, sine-wave electromotance is generated one time for 2 SN poles.

Therefore, when the rotor rotates one time:

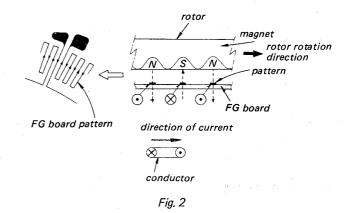
 $256 \text{ (poles)} \div 2 = 128 \text{ (times)}$

For 45 rotations:

128 (times) x 45 (rpm) \div 60 (seconds) = 96 (Hz)

In the same way, for $33^{1/3}$ rotations:

 $128 \text{ (times) } \times 33^{1/3} \text{ (rpm)} \div 60 \text{ (seconds)} = 71.1 \text{ (Hz)}$



FG Board Pattern Diagram (pattern surface)

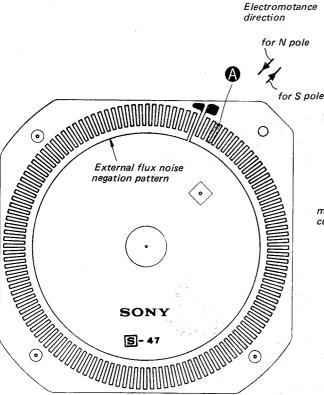
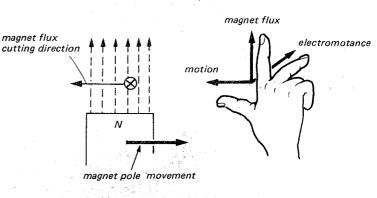
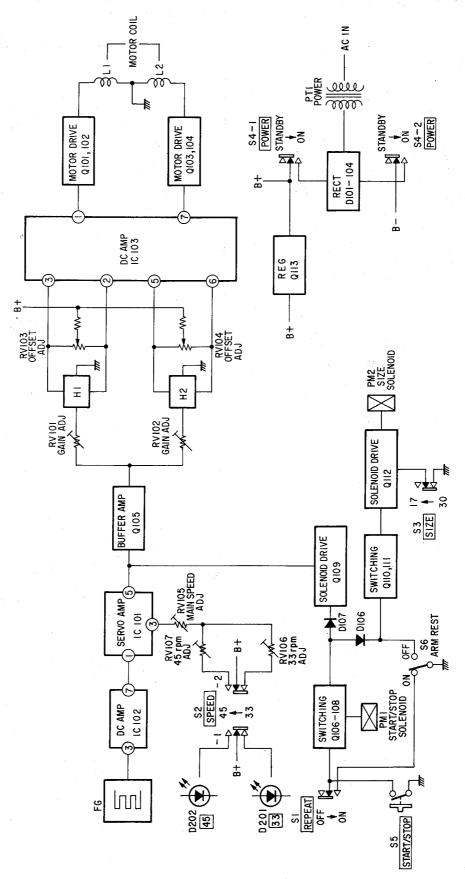


Fig. 1



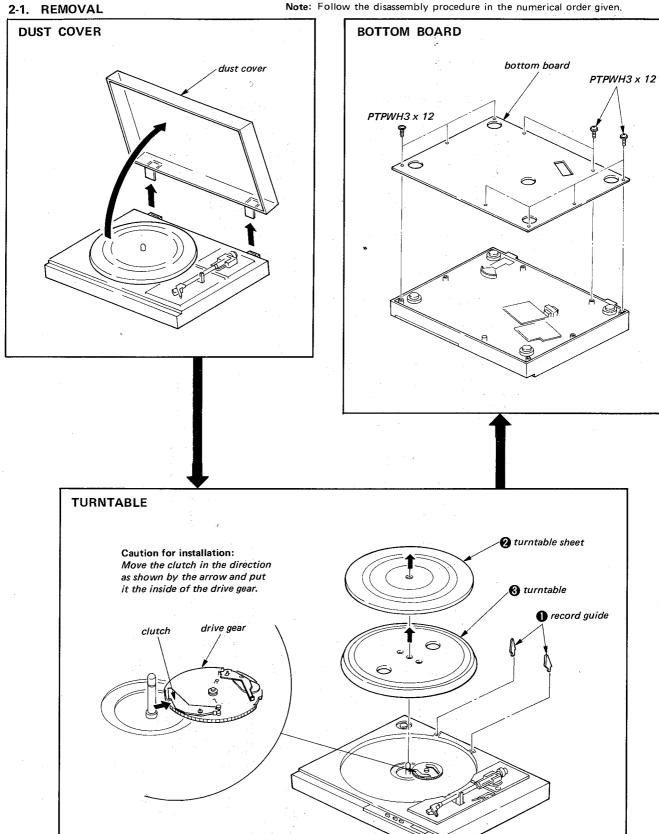
Fleming's right-hand rule

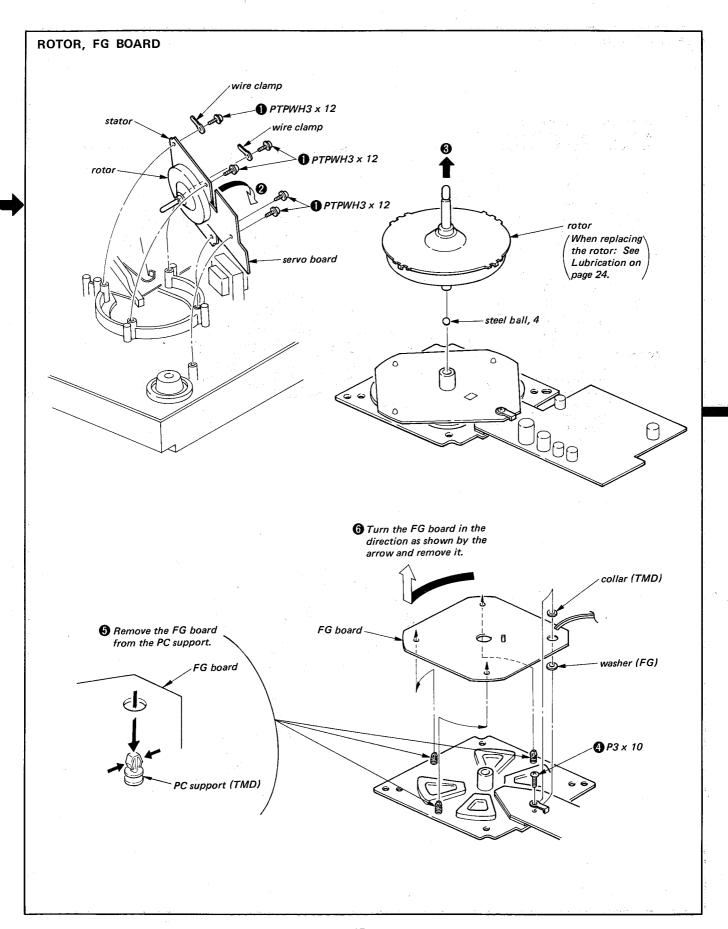
1-3. BLOCK DIAGRAM



SECTION 2 DISASSEMBLY

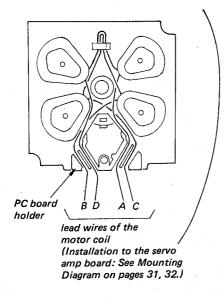
Note: Follow the disassembly procedure in the numerical order given.

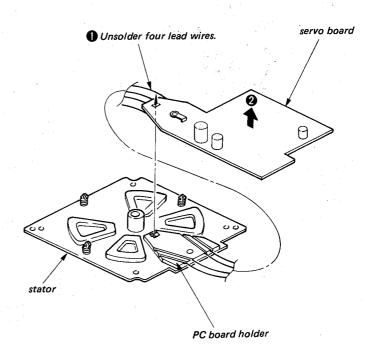


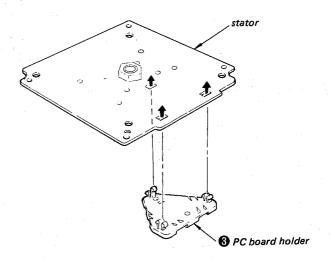


SERVO BOARD, STATOR

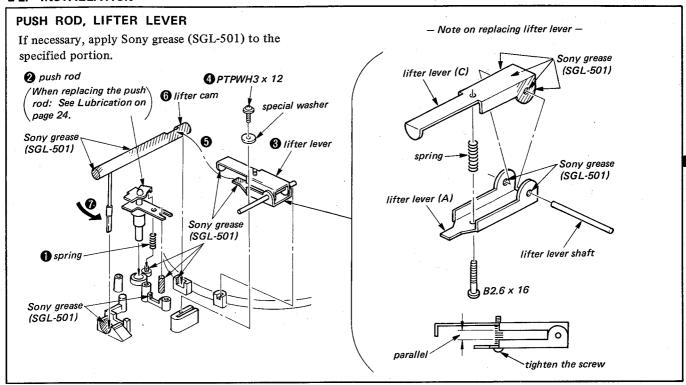
When installing, run the lead wires of the motor coil through the grooves of the PC board holder.

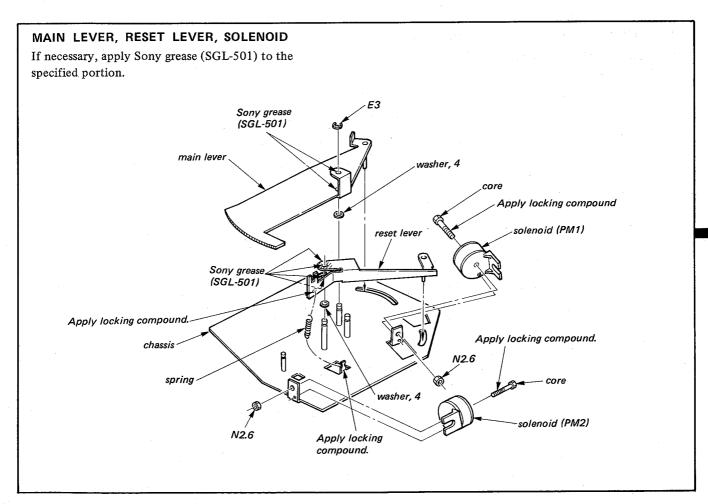


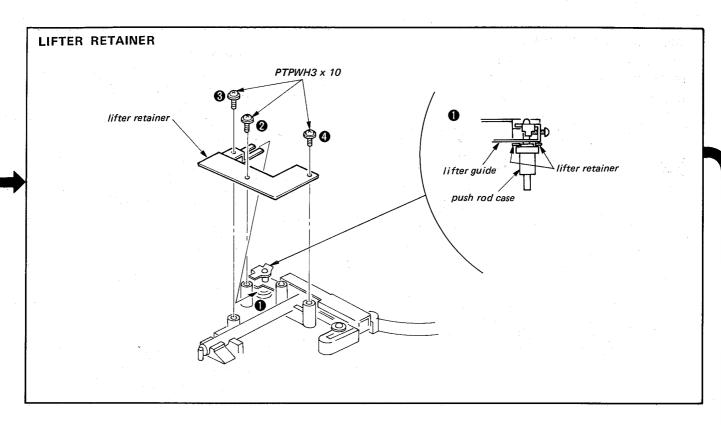


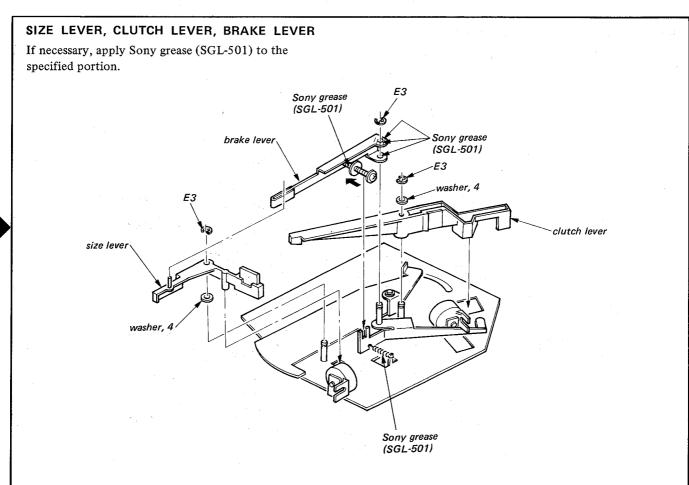


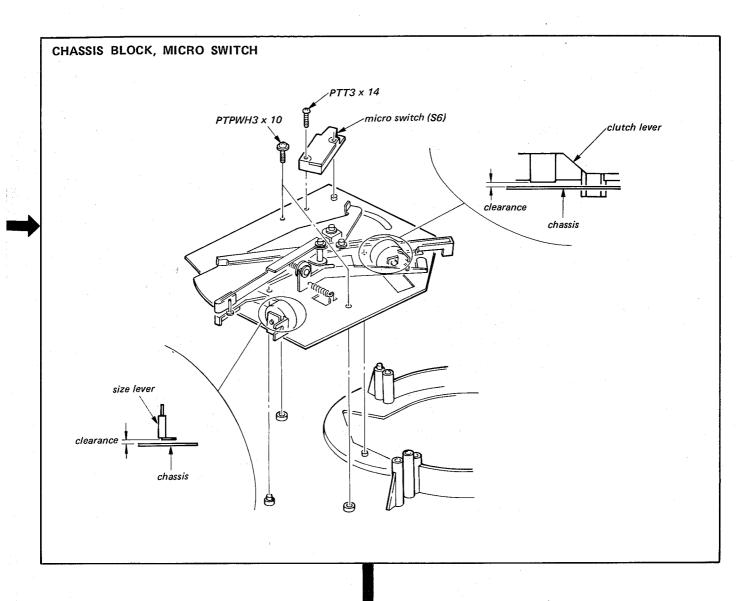
2-2. INSTALLATION

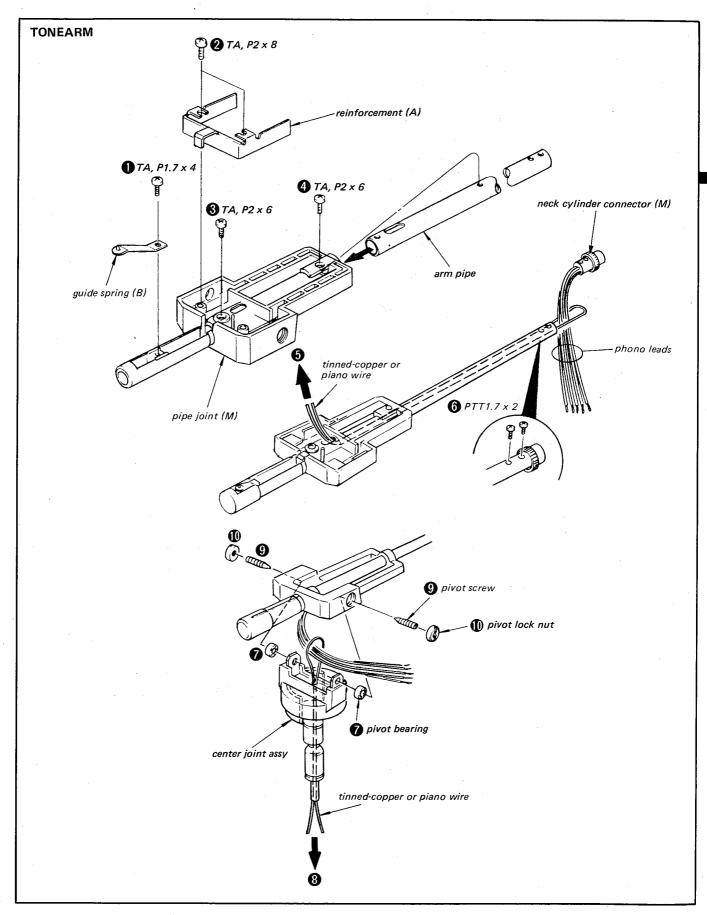


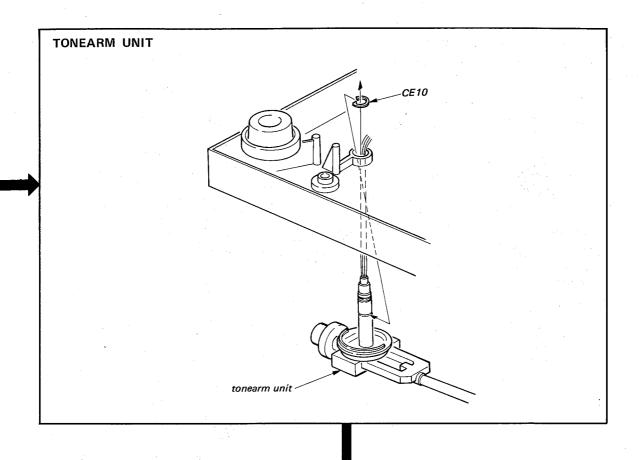


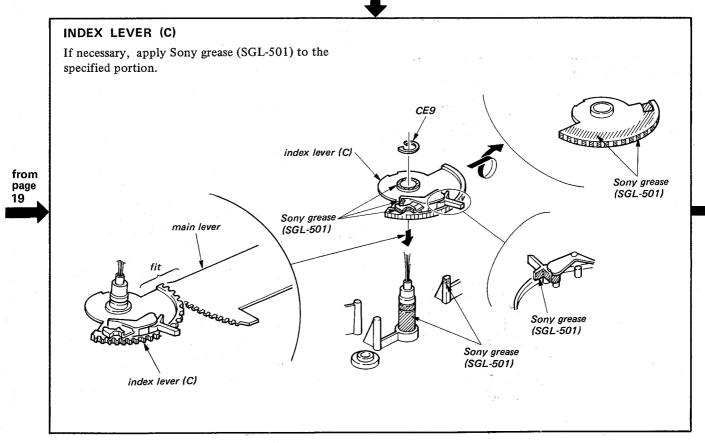


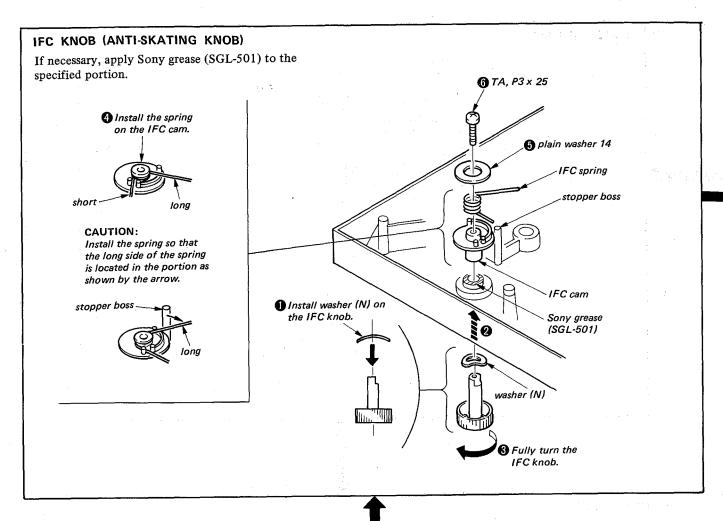


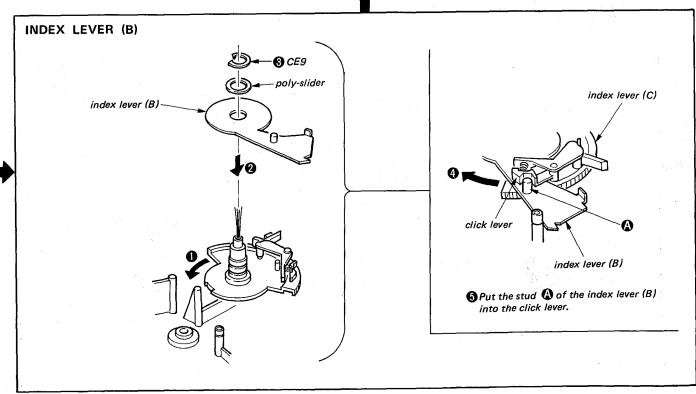


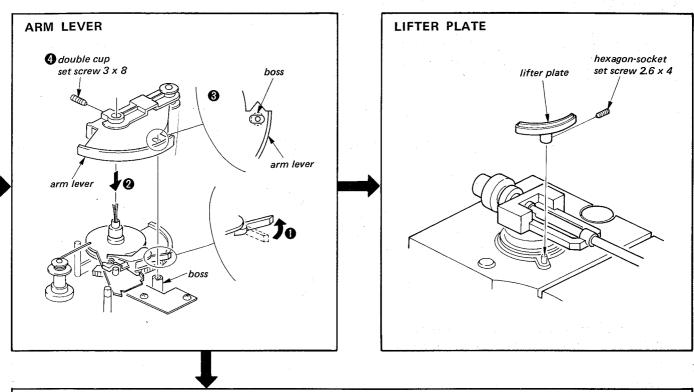


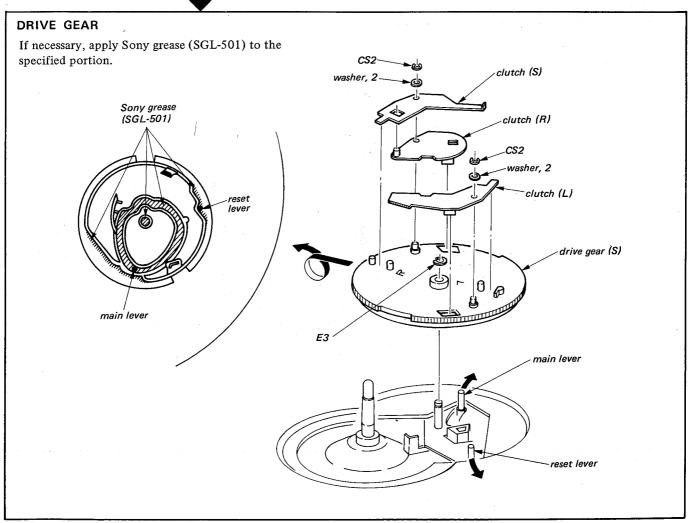






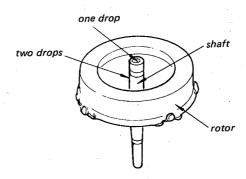






2-3. LUBRICATION

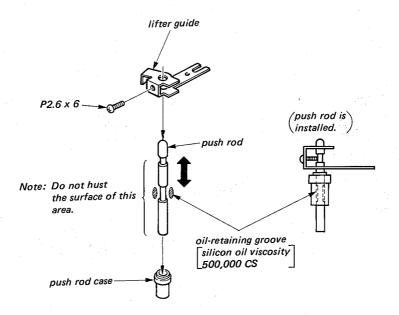
1. When the rotor is replaced, apply Sony oil OL-2KA to the rotor shaft as illustrated below.



2. When the push rod is replaced, apply silicon oil (viscosity: 500,000 cs) to the push rod as illustrated below.

Caution:

When lubricating, rotate and move the push rod up and down a few times.



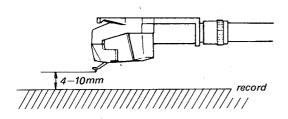
SECTION 3 ADJUSTMENTS

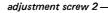
3-1. MECHANICAL ADJUSTMENTS

Stylus Height Adjustment

At automatic operation

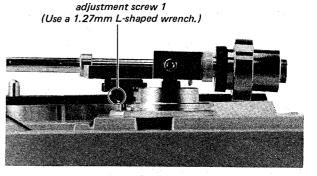
- Obtain zero balance and apply appropriate stylus force with counterweight. (2g for VL-5 cartridge, 1.8g for XL-150 cartridge)
- 2. POWER switch: ON
- 3. Put a record on and press START/STOP switch.
- 4. Turn the POWER switch OFF when the tonearm reaches the end of the record and the arm lifter rises to perform auto return.
- 5. At this time, turn the adjustment screw 1 so that the distance between the record surface and the stylus tip is 4-10mm.

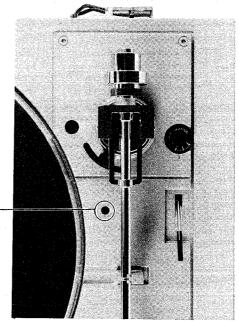


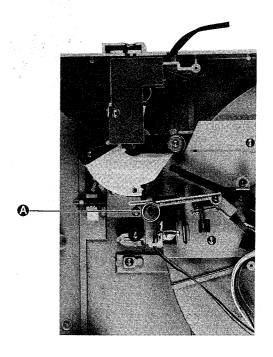


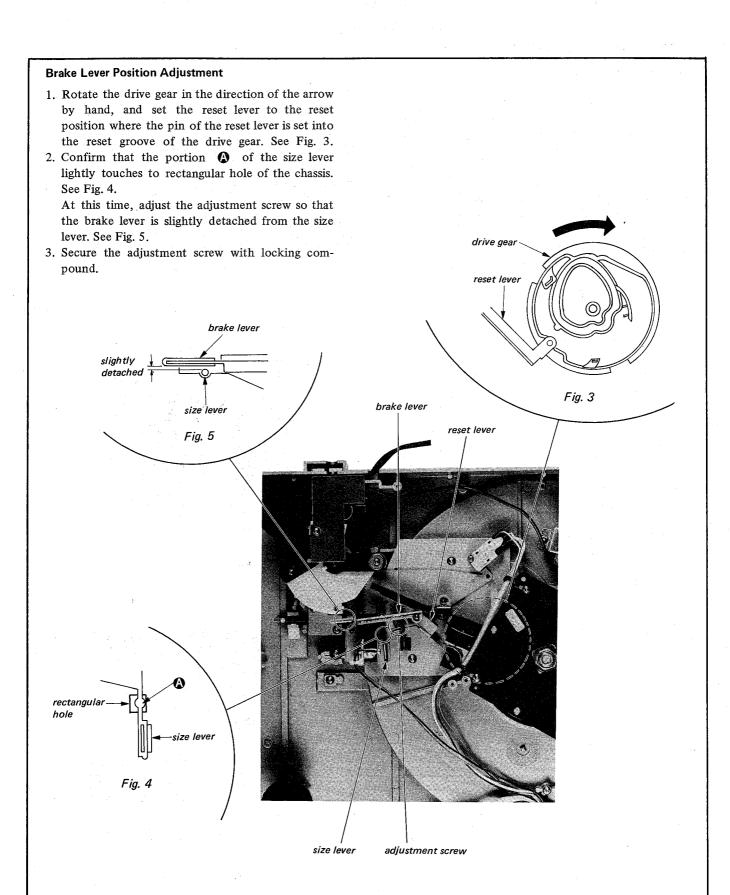
At manual operation

- 6. Set the lifter lever to "UP" position and push the START/STOP switch.
- 7. After the tonearm enter the lead-in groove of the record, stop the turntable rotation by turning the POWER switch OFF.
- 8. Set the lifter lever to "UP" position. Turn the adjustment screw 2 so that the distance between the record surface and the stylus tip is 4-10mm.
- 9. Secure the portion A with locking compound.



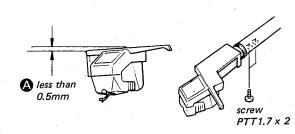






Shell's Horizontal Balance Adjustment

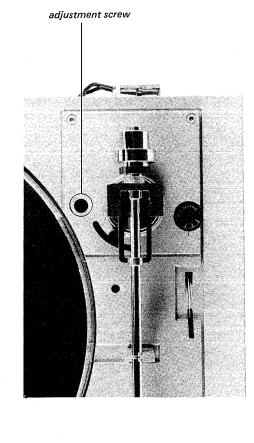
Loosen the neck cylinder screw and adjust so that section (shell slant) is less than 0.5mm.



Stylus Drop-point Adjustment

- 1. Remove the adjustment hole cap.
- 2. Set stylus force, anti-skating scale. (stylus force 2g and anti-skating scale 2 for VL-5 cartridge, stylus force 1.8g and anti-skating scale 1.8 for XL-150 cartridge.)
- 3. SPEED switch: 33 rpm
- 4. Use test record YFSC-16. Press START/STOP
- 5. Turn the adjustment screw so that the stylus tip drops on the record at the 7 - 15 count position. clockwise: drop-point moves inward (larger count) counterclockwise: drop-point moves outward (lower count)
- 6. After the adjustment, confirm that the autoreturn is started within 3 - 12 count on the test record.

Note: The proper adjustment for a 30cm record is also correct for a 17cm record.



3-2. ELECTRICAL ADJUSTMENTS Speed Adjustment Note: Use a small-blade screwdriver for the adjustments. 1. Connect a frequency counter to pin (1) of IC102. 2. Turn the POWER switch ON. frequency counter 3. Turn the SPEED switch to 45. 4. Adjust the coarse adjustment RV105 for a 96Hz reading on the frequency counter. **3** If it is not obtained 96Hz, adjust the fine adjustment RV107 for 95.72 - 96.26Hz reading. 5. Turn the SPEED switch to 33. 6. Adjust the fine adjustment RV106 for 70.90 -71.32Hz reading. RV107

3C/33(A)

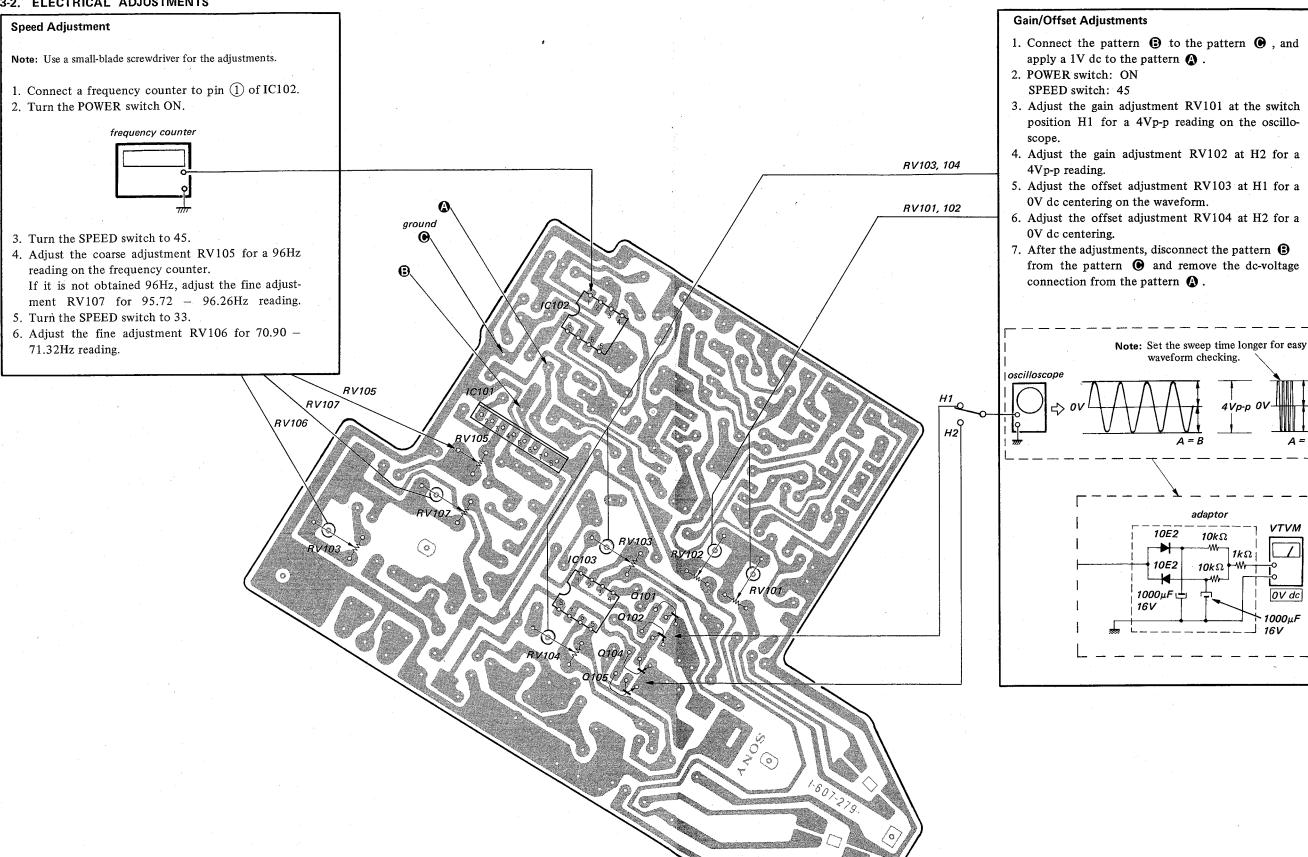
OP

ınt)

ard

test

3-2. ELECTRICAL ADJUSTMENTS



SECTION 4

PS-LX33/33B/33C/33(A)

PS-LX33

Semiconductor Lead Layouts

2\$A1027R	GL9PR10
E C B	long short cathode anode
2SB734 2SD774	HL-300C
E C B	OUT
1S1555 10E2 HZ6A2L cathode	
	2SB734 2SD774 2SD774 1S1555 10E2 HZ6A2L cathode

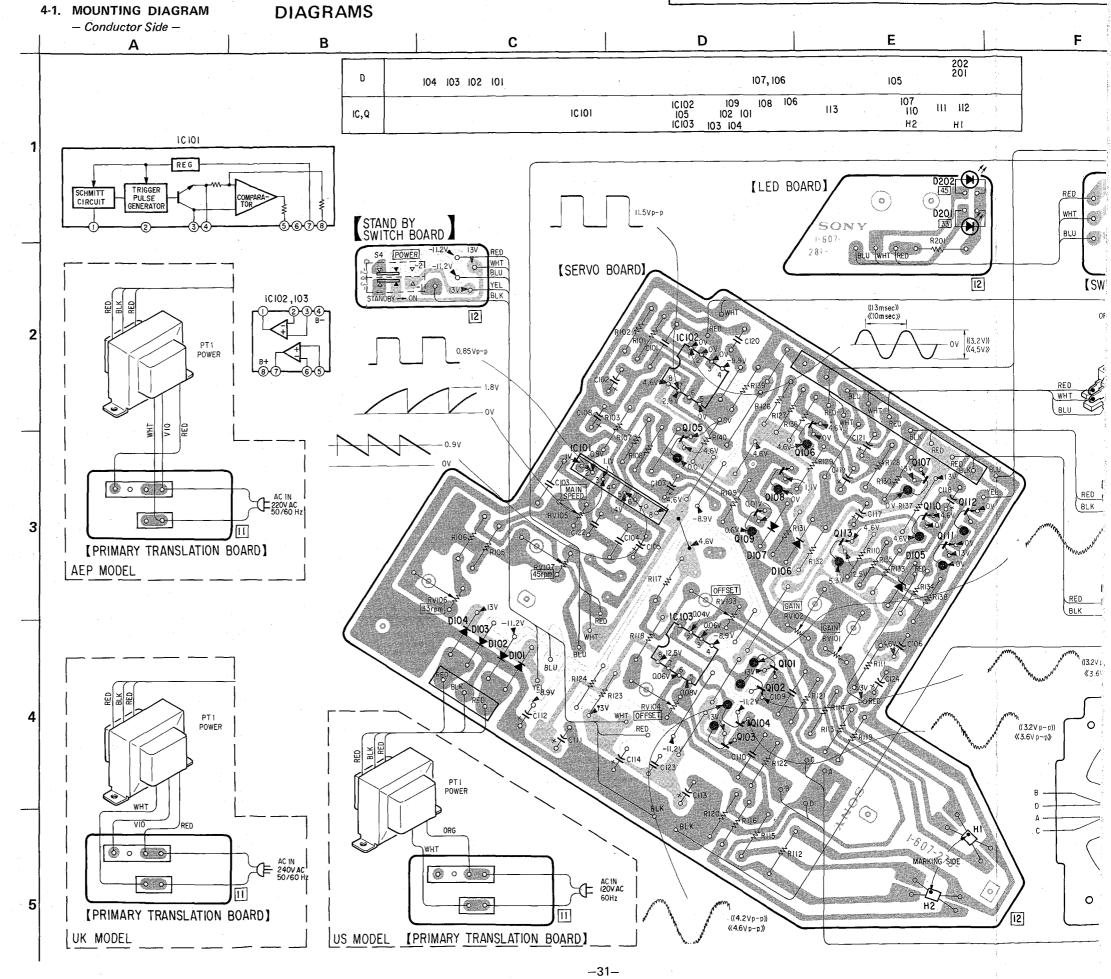
Note:

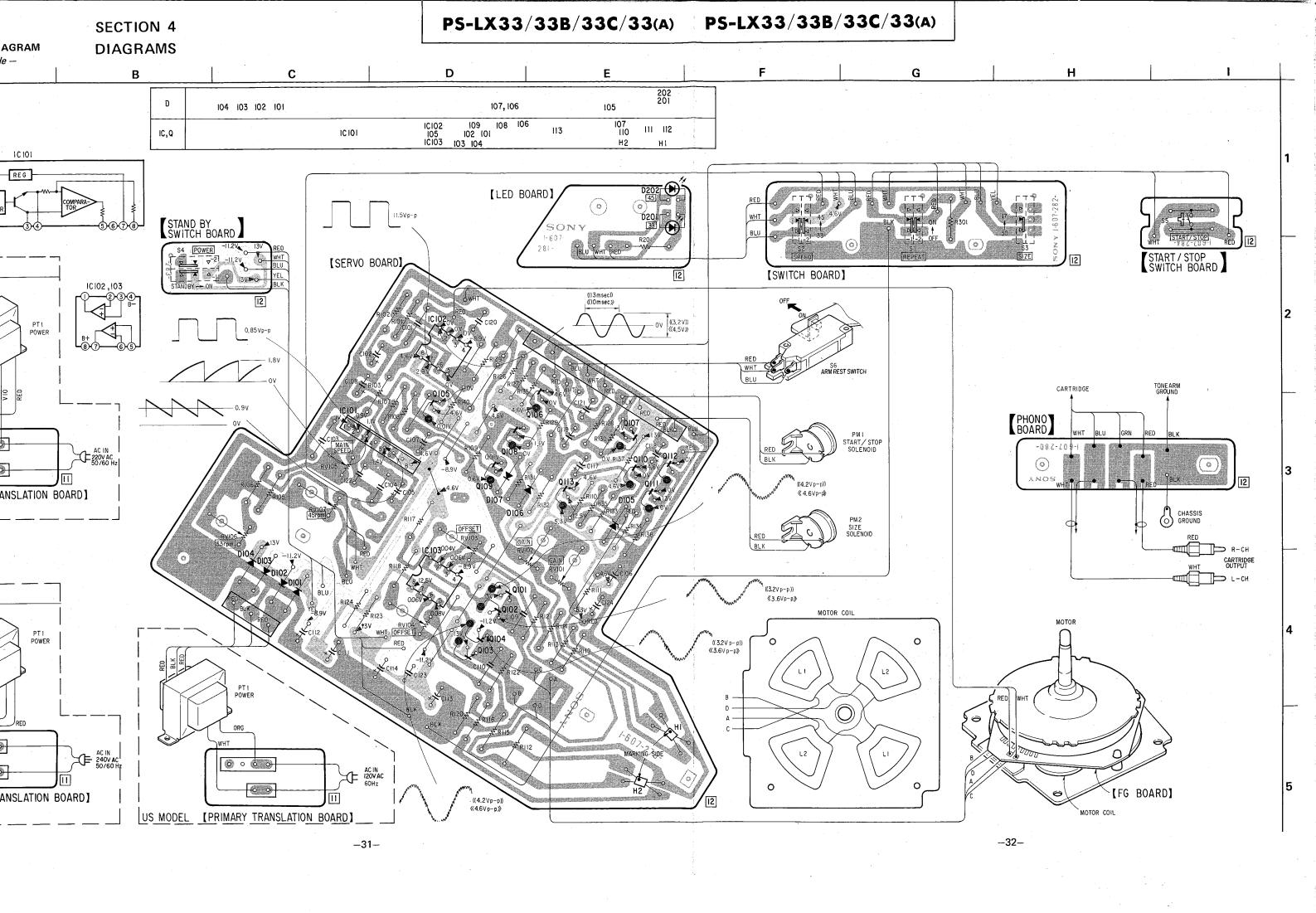
Color code of sleeving over the end of the jacket.



- o—: parts extracted from the component side.
- •— : parts extracted from the conductor side.
- B+ pattern

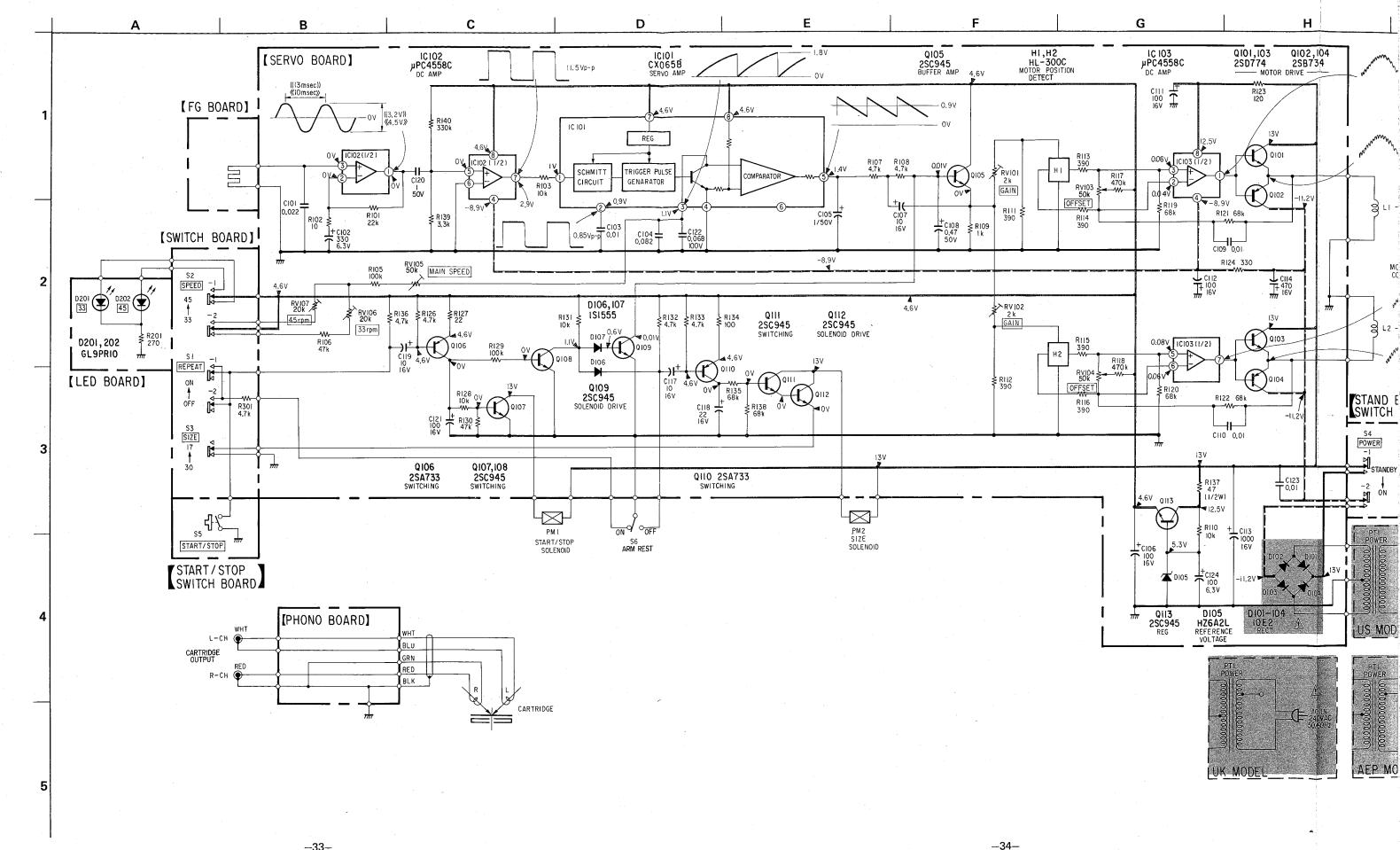






4-2. SCHEMATIC DIAGRAM

-33-



Note: The components identified by shading and mark A are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro

Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$ 50WV or less are not indicated except for electrolytics
- All resistors are in ohms, ¼ W unless otherwise noted. $k\Omega:1000\,\Omega,\,M\Omega:1000\,k\Omega$
- _____ : adjustment for repair

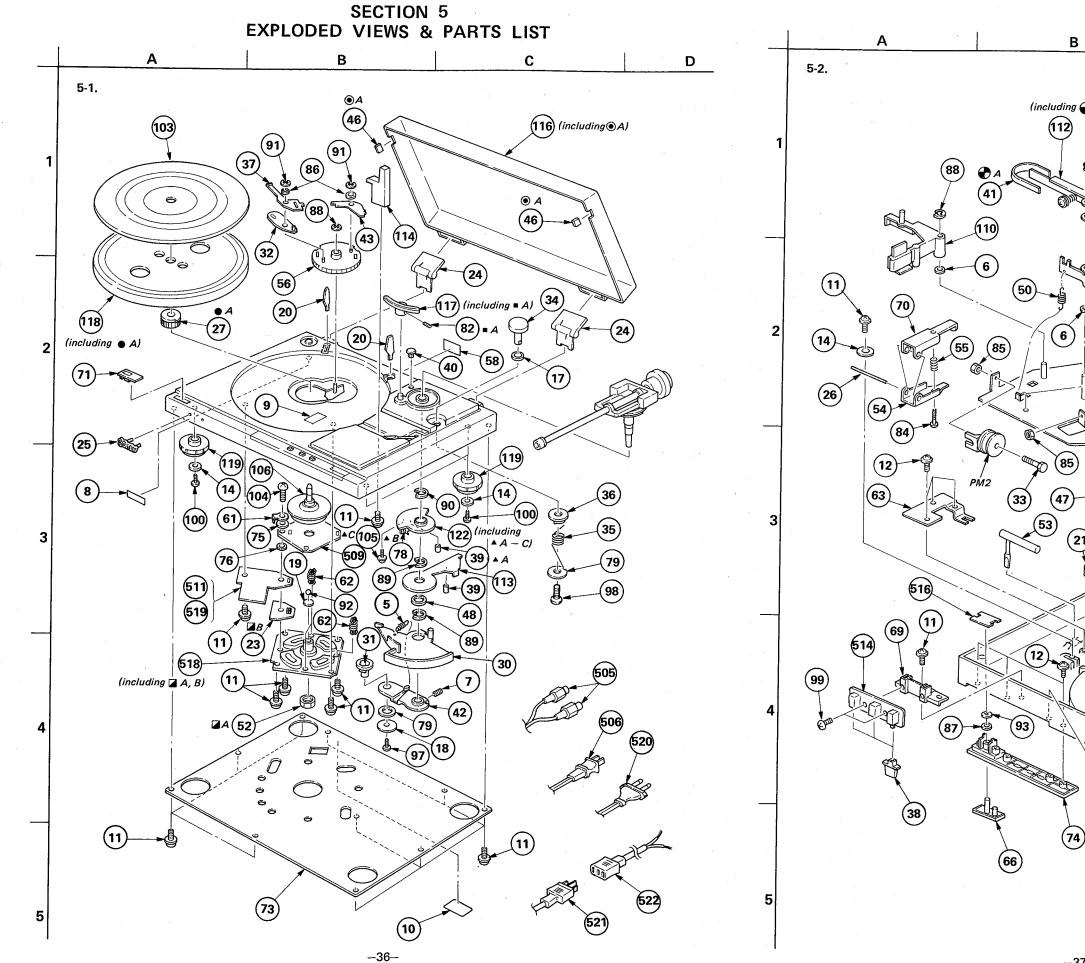
- Voltages are dc with respect to ground unless otherwise
- Readings are taken under POWER switch ON conditions.
- Voltage variations may be noted due to normal produc-
- · Waveforms are taken with respect to ground.

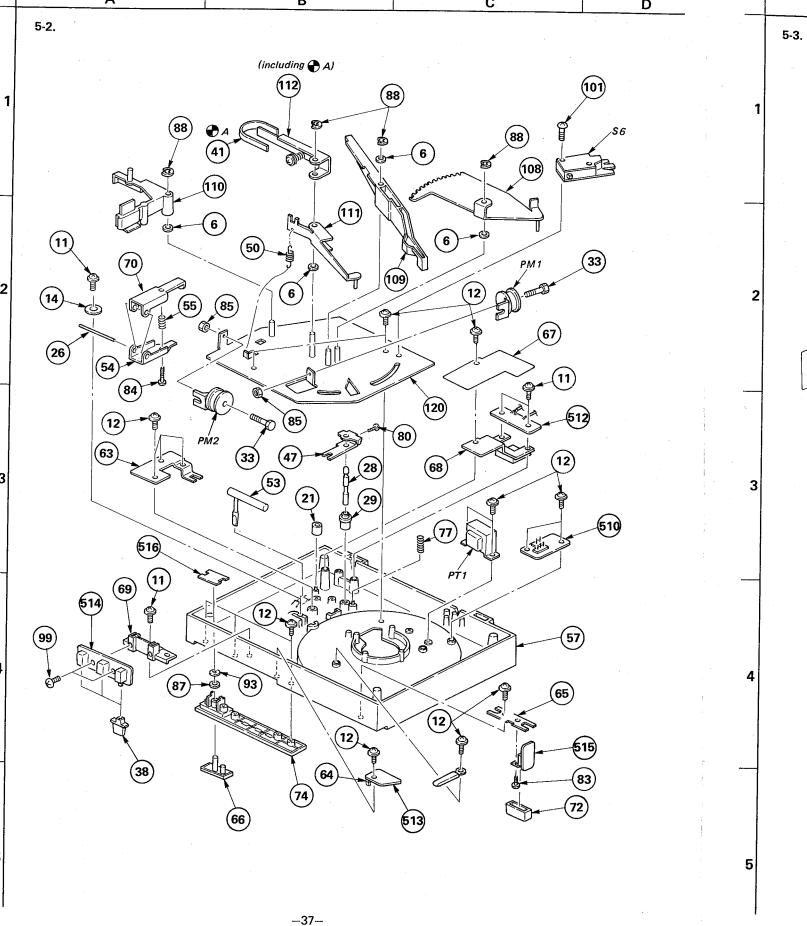
)) : 33 rpm

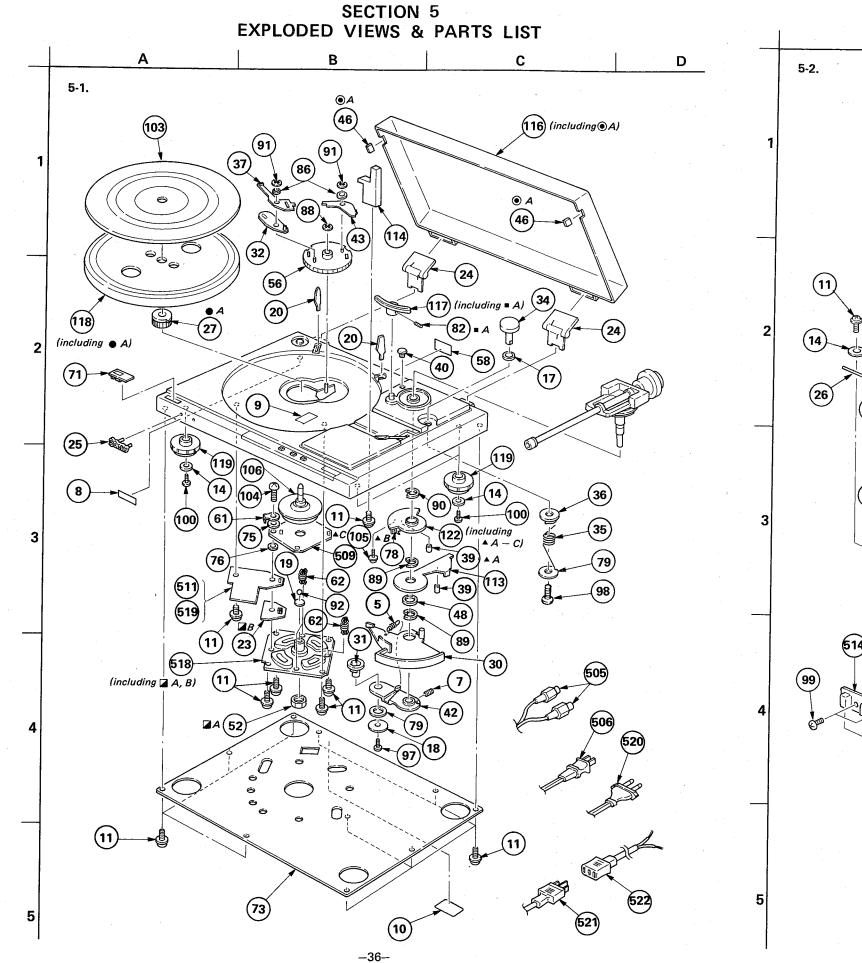
≫ : 45 rpm

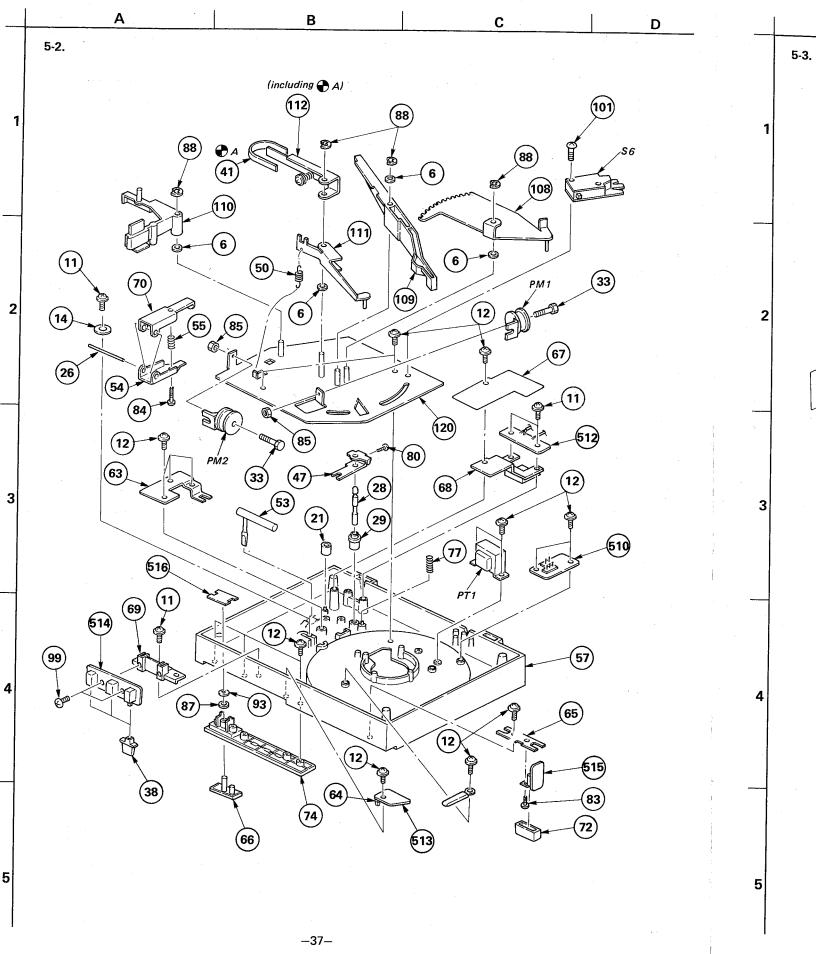
no mark : common

Note: Voltages are measured with a VOM (50k Ω /V).









GENERAL SECTION

No.	Part No.	Description
1 2 3	2-056-532-00 2-203-518-61 2-203-519-00	(LX33C)SCREW SCREW, PIVOT NUT (A), LOCK, PIVOT
4 5 6	2-229-507-00 3-548-124-00 3-701-441-21	(LX33C)WASHER SPRING, TENSION WASHER
7 8 9	3-701-509-00 4; 3-701-690-00 3-794-123-11	SET SCREW, DOUBLE CUP 3X8 (LX33:UK,LX33(A))LABEL (MADE IN JAPAN) LABEL, CAUTION
10 10	3-703-043-21 •;4-876-344-00	(LX33:UK,LX33C/(A))LABEL, CAUTION, MAIN (LX33/B:AEP)LABEL, CAUTION, POWER CORD
11 12 13	3-703-136-00 3-703-137-00 3-703-454-00	SCREW, PTPWH 3X12 SCREW, PTPWH 3X10 SCREW, TAPPING
14 15 16	4-301-647-00 2-331-306-00 4-815-655-01	WASHER, SPECIAL (LX33/(A)/B)COVER, STYLUS (LX33C)NUT
17 18 19	4-844-041-00 4-844-041-11 4-852-007-00	WASHER, (N) WASHER, (N) RETAINER (A), THRUST
20 21 22	4-874-262-00 4-852-841-00 4-853-043-00	GUIDE, RECORD TUBE SPRING (B), GUIDE
23 24 25	4-857-642-00 4-857-653-00 4-857-661-11	HOLDER, PC BOARD (LX33/C/B)HINGE, DUST COVER EMBLEM, SONY
26 27 28	♦;4 -861-940-00 4-868-052-00 4-881-688-00	SHAFT, LIFTER LEVER GEAR, CENTER ROD, PUSH
	♦ ;4-874-218-00 4-874-223-00 4-874-231-00	CASE, PUSH ROD LEVER (A), ARM CAM, ECCENTRIC
32 33 34	4-874-232-00 4-874-234-00 4-874-247-00	CLUTCH (R) CORE KNOB, IFC
35 36 37	4-874-250-00 4-874-252-00 4-874-254-00	SPRING CAM, IFC CLUTCH (S)
38 39		KNOB (A) RUBBER, SHOCK ABSORBING
40 40	4-874-260-01 4-874-260-11	(LX33/C/(A))CAP, BLIND (LX33B)CAP, BLIND
41 42 43	4-874-275-00 4-874-277-00 4-874-279-00	PAD, BRAKE LEVER (B), ARM CLUTCH (L)

GENERAL SECTION

No.	Part No.	<u>Description</u>
44 45 46	4-875-210-00 4-875-218-00 4-876-304-00	PIPE, ARM JOINT (M), PIPE (LX33/C/B)CUSHION, DUST COVER
48	♦;4-876-317-00 4-876-324-21	GUIDE, LIFTER POLY-SLIDER (DIA. 9.5)
49 50	4-876-346-00	SPRING, TENSION (RESET)
51	4-876-348-00	(LX33/(A)/B)GUIDE, STYLUS PRESSURE SETTING
52	₺;4 -881-687 - 00	NUT (M12), SERRATION
53 54 55 56	4-877-824-00 •;4-880-501-00 4-880-503-00 4-880-524-00	CAM, LIFTER LEVER (A), LIFTER SPRING, COMPRESSION GEAR (S), DRIVE
57 57	♦; 4-881-602-02 4-881-602-11	(LX33/C/(A))FRAME (LX33B)FRAME
58 58 58 58	4-881-605-00 4-881-606-00	(LX33C)LABEL, MODEL NUMBER (LX33:AEP)LABEL, MODEL NUMBER (LX33:UK,LX33(A))LABEL, MODEL NUMBER (LX33B)LABEL, MODEL NUMBER
	4-881-618-00 •;4-881-628-00 •;4-881-629-00	BEARING, PIVOT REINFORCEMENT (A) PLATE (A), GROUND
63	♦; 4-881-636-00 ♦; 4-881-652-00 ♦; 4-881-653-00	SUPPORT (TMD), PC RETAINER (B), LIFTER SPACER, LED
66	♦;4-881-654-00 4-881-655-00 ♦;4-881-656-00	BRACKET, SWITCH KNOB, START PLATE (UPPER), SHIELD
69	♦;4 -881-657-00 ♦;4 -881-658-00 ♦;4 -881-659-00	PLATE (LOWER), SHIELD HOLDER, SWITCH LEVER (C), LIFTER
71 71 71	4-881-660-01 4-881-660-11 4-881-660-31	(LX33C)ESCUTCHEON, POWER (LX33/(A))ESCUTCHEON, POWER (LX33B)ESCUTCHEON, POWER
72 72	4-881-662-00 4-881-662-11	(LX33/C/(A))KNOB, POWER (LX33B)KNOB, POWER
73 74 74	♦ ;4-881-663-00 4-881-664-00 4-881-664-11	BOARD, BOTTOM (LX33/C/(A))PANEL, CONTROL (LX33B)PANEL, CONTROL
75 76 77		COLLAR (TMD) WASHER (FG) SPRING, COMPRESSION (LIFTER)
78 79 80	4-881-676-00 0-056-028-00 7-621-259-45	SPRING (CLICK), COMPRESSION WASHER, PLAIN, 14 DIA. SCREW +P 2.6X6

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked " " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- · Due to standardization, parts with part numbers (Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -XX or Δ - $\Delta\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -XX) may be different from those used in the set

CAPACITORS:

All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF , PF: $\mu \mu F$.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- · F : nonflammable

COILS

· MMH : mH, UH : բH

The components identified by shading and mark Aare critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Asont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SEMICONDUCTORS

In each case, U : μ, for example:
UA···: μΑ···, UPA···: μΡΑ···, UPC···: μΡC,
UPD···: μPD···

GENERAL SECTION

No.	Part No.	Description
81	7-621-712-17	SET-SCREW, SLOT 2.6X2 CUP POINT
82	7-621-738-08	SET-SCT, HEX. 2.6X4, FLAT POINT
83	7-621-770-87	SCREW +P 2.6X5
84	7-621-775-80	SCREW +B 2.6X16
85	7-622-207-05	N 2.6, TYPE 2
86	7-623-105-15	W 2, MIDDLE
87	7-623-925-11	WASHER 4.0, NYLON
88	7-624-106-04	STOP RING 3.0, TYPE -E
89	7-624-133-44	STOP RING 9, TYPE-CE
90	7-624-133-54	STOP RING 10, TYPE-CE
91	7-624-190-81	STOP RING 2, TYPE-CS
92	7-671-114-01	BALL 4, STEEL
93		STOP RING 4, TYPE-CS
94 95	7-685-104-64	SCREW +P 2X6 TYPE4
96 97 98	7-685-145-21	SCREW +P 2X8 TYPE2 SLIT SCREW +P 3X6 TYPE2 SLIT SCREW +P 3X25 TYPE2 SLIT
99	7-685-646-21	SCREW +BVTP 3X8 TYPE2 SLIT
100	7-685-651-21	SCREW +BVTP 3X20 TYPE1
101	7-685-755-01	SCREW +PTT 3X14 (S)
102	7-685-772-04	SCREW +PTT 1.7X2, TYPE1
103 103	4-877-807-01 4-877-807-11	(LX33/(A)/B)SHEET, TURNTABLE (LX33C)SHEET, TURNTABLE
104	7-682-149-13	SCREW +P 3X10
105	7-687-202-21	TOTSU PTPWH 2X4, TYPE 2, SLIT
106	A-4608-213-A	ROTOR ASSY
107	X-4869-912-2	(LX33C)SHELL ASSY, HEAD
108	4; X-4874-202-0	LEVER ASSY, MAIN
109	X-4874-203-0	LEVER ASSY, CLUTCH
111 112	•; X-4874-204-0 •; X-4874-205-0 •; X-4874-206-0 •; X-4874-209-0	LEVER ASSY, SIZE LEVER ASSY, RESET LEVER ASSY, BRAKE LEVER (B) ASSY, INDEX
114 114	X-4874-212-1 X-4874-212-X	(LX33/C/(A))REST ASSY, ARM (LX33B)REST ASSY, ARM
115 116 117	X-4874-214-0 X-4877-804-0 X-4880-501-0	WEIGHT ASSY, MAIN (LX33/C/B)COVER ASSY, DUST PLATE ASSY, LIFTER
118	X-4881-603-0	TURNTABLE ASSY
119	X-4881-607-0	INSULATOR ASSY
120	4; X-4881-608-0	CHASSIS ASSY
121	X-4881-611-0	JOINT ASSY, CENTER
122	X-4881-610-0	LEVER (C) ASSY, INDEX

ACCESSORY & PACKING MATERIAL

Part No.	<u>Description</u>
3-701-613-00 3-701-616-00	BAG, POLYETHYLENE, FOR RECORD GUIDE BAG, POLYETHYLENE, FOR MAIN WEIGHT, CARTRIDGE
3-701-630-00 3-701-634-00 3-701-806-00 3-703-450-02	BAG, POLYETHYLENE, FOR INSTRUCTION MANUAL BAG, POLYETHYLENE, FOR TURNTABLE ADAPTOR, 45 (LX33C)INSTRUCTION
3-773-032-11 3-773-032-21 3-773-032-41 3-773-262-11 3-773-262-41	(LX33/(A))MANUAL, INSTRUCTION (LX33C)MANUAL, INSTRUCTION (LX33:AEP)MANUAL, INSTRUCTION (LX33B)MANUAL, INSTRUCTION (LX33B)MANUAL, INSTRUCTION
4-862-043-00 4-862-680-00 4-876-320-00	CUSHION, ARM (LX33/C/B)PROTECTOR SPACER, CLUTCH
4-876-352-00 4-879-798-00 4-881-668-00	(LX33/C/B)SHEET, PROTECTION, FOR SET (LX33(A))SHEET, PROTECTION, FOR SET HOLDER, TURNTABLE
4-881-669-00 4-881-670-00 4-881-671-00	(LX33/C/B)CUSHION, LEFT (LX33/C/B)CUSHION, RIGHT CUSHION, TURNTABLE
4-881-679-00 4-881-680-00 4-881-685-00 4-881-686-00	(LX33/B)INDIVIDUAL CARTON (LX33C)INDIVIDUAL CARTON (LX33(A))INDIVIDUAL CARTON (LX33(A))CUSHION

NOTE:

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- . Items marked " lacksquare " are not stocked since they are seldom required for routine service. Some delay should be antici-pated when ordering these items.
- · Due to standardization, parts with part numbers (Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ - ΔXX or Δ - $\Delta\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -X) may be different from those used in the set.

CAPACITORS:

All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF , PF: $\mu \mu F$.

RESISTORS

· All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

• F : nonflammable

COILS

· MMH : mH, UH : բH

The components identified by shading and mark Aare critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque Asont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SEMICONDUCTORS

In each case, U : μ, for example: UA···: μΑ···, UPA···: μΡΑ···, UPC···: μΡC, UPD···: μPD···

ELECTRICAL PARTS

Ref.No.	Part No.	<u>Description</u>
502 ₺	;1-508-800-13 ;1-508-806-13 ;1-535-115-00	U TYPE BASE POST 3P U TYPE BASE POST TERMINAL
505	;1-535-117-00 1-551-294-00 .1-551-628-00	TERMINAL CORD (US)CORD, POWER
507 508 509 ቆ	1-555-463-00 1-561-551-00 ;1-607-274-00	(LX33C)CONNECTOR, WITH LEAD CONNECTOR, NECK CYLINDER (M) PC BOARD, FG
511 🌢	;1-607-278-00 ;1-607-279-00 ;1-607-280-00	PC BOARD, PRIMARY TRANSLATION PC BOARD, SERVO PC BOARD, PHONO
514	;1-607-281-00 ;1-607-282-00 ;1-607-283-00	PC BOARD, LED PC BOARD, SWITCH PC BOARD, STAND-BY SWITCH
516 ♦ 517 518	;1-607-284-00 A-4505-069-A A-4608-214-A	PC BOARD, START STOP SWITCH (LX33/(A)/B)CARTRIDGE COMPLETE ASSY STATOR ASSY
520 🔥	;A-4619-182-A .1-534-817-XX .1-551-962-00	MOUNTED PCB, SERVO (AEP)CORD, POWER, EULO PLUG (UK)CORD, POWER
523	.1-551-967-00 1-549-105-00	(UK)CORD, POWER (LX33C)CARTRIDGE COMPLETE ASSY
524	A-4587-062-A	(LX33/(A)/B)STYLUS ASSY
C120	1-123-228-00	ELECT (NONPOLAR) 1MF 20% 50V
C120 D101 A D102 A		ELECT (NONPOLAR) 1MF 20% 50V DIODE 10E2 DIODE 10E2
C120 D101 A D102 A D103 A	1-123-228-00 .8-719-200-02 .8-719-200-02	ELECT (NONPOLAR) 1MF 20% 50V DIODE 10E2 DIODE 10E2
C120 D101 A D102 A D103 A D104 A D105	1-123-228-00 .8-719-200-02 .8-719-200-02 .8-719-200-02 .8-719-200-02 8-719-910-62	ELECT (NONPOLAR) 1MF 20% 50V DIODE 10E2 DIODE 10E2 DIODE 10E2 DIODE 10E2 DIODE HZ6A2L
D101 A D102 A D103 A D103 A D105 D106 D107 D201	1-123-228-00 .8-719-200-02 .8-719-200-02 .8-719-200-02 .8-719-200-02 8-719-910-62 8-719-815-55 8-719-815-55 8-719-909-10	ELECT (NONPOLAR) 1MF 20% 50V DIODE 10E2 DIODE 10E2 DIODE 10E2 DIODE 10E2 DIODE HZ6A2L DIODE 1S1555 DIODE 1S1555 DIODE GL9PR10
C120 D101 A D102 A D103 A D104 A D105 D106 D107 D201 D202 H1	1-123-228-00 .8-719-200-02 .8-719-200-02 .8-719-200-02 .8-719-200-02 .8-719-910-62 8-719-815-55 8-719-815-55 8-719-909-10 8-719-909-10 8-719-903-00	ELECT (NONPOLAR) 1MF 20% 50V DIODE 10E2 DIODE 10E2 DIODE 10E2 DIODE HZ6A2L DIODE 1S1555 DIODE 1S1555 DIODE GL9PR10 DIODE HL-300C
C120 D101 A D102 A D103 A D104 A D105 D106 D107 D201 D202 H1 H2 IC101 IC102	1-123-228-00 .8-719-200-02 .8-719-200-02 .8-719-200-02 .8-719-200-02 .8-719-910-62 .8-719-815-55 .8-719-909-10 .8-719-909-10 .8-719-903-00 .8-719-903-00 .8-759-602-65 .8-759-145-58	ELECT (NONPOLAR) 1MF 20% 50V DIODE 10E2 DIODE 10E2 DIODE 10E2 DIODE HZ6A2L DIODE 1S1555 DIODE GL9PR10 DIODE GL9PR10 DIODE HL-300C DIODE HL-300C IC CX065B IC UPC4558C

ELECTRICAL PARTS

Ref.No.	Part No.	<u>Description</u>
Q101 Q102 Q103		TRANSISTOR 2SB734
Q104 Q105 Q106	8-729-103-43 8-729-663-47 8-729-612-77	TRANSISTOR 2SC1364
Q107 Q108 Q109	8-729-663-47 8-729-663-47 8-729-663-47	TRANSISTOR 2SC1364
0111	8-729-612-77 8-729-663-47 8-729-663-47 8-729-663-47	TRANSISTOR 2SC1364 TRANSISTOR 2SC1364
R137	1-244-841-00	CARBON 47 5% 1/2W
RV101 RV102 RV103		RES, ADJ, CARBON 2K RES, ADJ, CARBON 2K RES, ADJ, CARBON 50K
RV104 RV105 RV106 RV107	1-224-661-00 1-226-237-00	RES, ADJ, CARBON 50K RES, ADJ, METAL GLAZE 50K RES, ADJ, CARBON 20K RES, ADJ, CARBON 20K
S1 S2 S3	1-553-331-21 1-553-331-21 1-553-331-21	
S4 S5 S6	1-552-928-00 1-553-580-00 1-516-657-00	SWITCH SWITCH, KEY BOARD SWITCH, MICRO

- · Items with no part number and no description are not stocked because they are seldom required for routine service.
- · Items marked " lack b " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- · Due to standardization, parts with part numbers $(\Delta-\Delta\Delta\Delta-\Delta\Delta\Delta-XX)$ or $\Delta-\Delta\Delta\Delta\Delta-\Delta\Delta\Delta-XX)$ may be different from those used in the

CAPACITORS:

All capacitors are in uF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF: µF, PF: µµF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- · F : nonflammable

COILS

· MMH : mH, UH : µH

The components identified by shading and mark Aare critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque Asont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SEMICONDUCTORS

In each case, $U: \mu$, for example: $UA\cdots: \mu A\cdots$, $UPA\cdots: \mu PA\cdots$, $UPC\cdots: \mu PC$, $\text{UPD}\cdots:\ \mu\text{PD}\cdots$

ELECTROLYTIC CAPACITORS

			RATING		→: Use the high volt	age rated one.
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
CAP. (µF)	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47		 			→	1-121-726-00
1.0					→	1-121-391-00
2.2					→	1-121-450-00
3.3	→		>	1-121-392-00	→	1-121-393-00
3.3 4.7			→	1-121-395-00	→	1-121-396-00
10	→	-	1-121-651-00	1-121-398-00	→ -	1-121-738-00
22	l →	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
33			1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
47		1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
100	→	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
220	1-121-412-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
330	1-121-751-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
470	1-121-424-00	1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
1000		1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
2200	1-121-658-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	-
3300	1-121-661-00	1-123-075-00	1-123-071-00	_		

	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.	
CAP. (µF)	PART No.	PART No.	PART No.	PART No.	
0.47		_	_	_	
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00	
2.2	1-123-250-00	1-123-026-00	_	1-123-028-00	
3.3	1-121-995-00	_	1-123-004-00	1-123-006-00	
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00	
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00	
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00	
33	1-121-997-00	1-121-757-00	_	_	
47	1-123-251-00	1-121-919-00	_	_	
100	1-123-084-00	_		_	

CERAMIC CAPACITORS

			RAT	ING			
	50 VOLT.		50 VOLT.		50 VOLT.	CAP, (µF)	50 VOLT.
CAP. (pF)	PART No.	CAP. (pF)	PART No.	CAP. (pF)	PART No.	CAP. (µ1)	PART No.
0,5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00	ĺ			

0.001µF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

RATING →: Use the high voltage rated one.								
	25 VOLT.	50 VOLT.	200 (5)	25 VOLT.	50 VOLT.			
CAP. (µF)	PART No.	PART No.	CAP. (µF)	PART No.	PART No.			
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00			
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00			
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00			
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00			
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00			
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00			
0.0033	→	1-161-045-00	0.056	→	1-161-060-00			
0.0039	_ <u>→</u> '	1-161-046-00	0.068	→	1-161-061-0			
0.0047	l -	1-161-047-00	0.082	1-161-024-00	1-161-062-00			
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00			
0.0068	→	1-161-049-00						
0.0082	1-161-012-00	1-161-050-00						
0.01	1-161-013-00	1-161-051-00						
0.012	→	1-161-052-00						
0.015	1-161-015-00	1-161-053-00						

MYLAR CAPACITORS

	RATING										
	50 VOLT.	100 VOLT.	200 VOLT.		50 VOLT.	100 VOLT.	200 VOLT.	CAP. (µF)	50 VOLT.	100 VOLT.	200 VOLT.
CAP. (µF)	PART No.	PART No.	PART No.	CAP. (µF)	PART No.	PART No.	PART No.	CAP. (µF)	PART No.	PART No.	PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00		_
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	-	_
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00		-
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	_	-
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00	1			
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



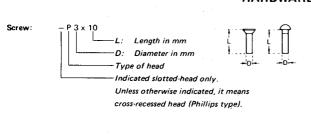
		•	RATING	→:	Use the high voltag	e rated one.	
/	3.15 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	25 VOLT.	35 VOLT.
CAP. (µF)	PART No.	PART No.	PART No.				
0.01					.→		1-131-396-00
0.015						>	1-131-397-00
0.022							1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068						→	1-131-401-00
0.1					→	→	1-131-402-00
0.15							1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47	-	_	_	-	1-131-412-00		1-131-406-00
0.68		-	_	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0	_		1-131-418-00	-	1-131-413-00	→	1-131-408-00
1.5	_	1-131-421-00		1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	_	1-131-419-00	- 1	1-131-414-00	1-131-355-00	1-131-349-00
3.3	-	1-131-422-00	_	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00	_	1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8	-	1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00	-			
68	1-131-394-00	1-131-388-00		_			
100	1-131-395-00	_	_	-			

TANTALUM CAPACITORS = RATING 3 VOLT. 6.3 VOLT. 10 VOLT. 16 VOLT. 20 VOLT. 35 VOLT. **CAP.** (μ**F**) PART No. PART No. PART No. PART No. PART No. PART No. 1-131-273-00 0.033 1-131-274-00 1-131-275-00 0.047 0.068 1-131-276-00 0.1 0.15 1-131-277-00 1-131-262-00 1-131-263-00 1-131-278-00 1-131-279-00 0.33 1-131-169-00 1-131-264-00 1-131-280-00 0.68 1-131-258-00 1-131-265-00 1-131-281-00 1-131-266-00 1-131-267-00 1-131-282-00 1-131-283-00 1.0 1-131-254-00 1-131-250-00 1.5 2.2 1-131-259-00 1-131-268-00 1-131-284-00 3.3 4.7 1-131-255-00 1-131-269-00 1-131-270-00 1-131-251-00 1-131-171-00 1-131-260-00 1-131-271-00 6.8 10 1-131-256-00 1-131-272-00 15 1-131-252-00 1-131-261-00 1-131-257-00 22 33 1-131-176-00 1-131-253-00 1-131-173-00 1-131-288-00 1-131-174-00 100 1-131-177-00

1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	. 110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-243-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	. 75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE



Reference Designation Shape		Description	Remarks			
		SCREWS	<u> </u>			
P €∋		pan-head screw	binding-head (B) screw for replacement			
PWH	€	pan-head screw with washer face	binding-head (B) screw and flat washer for replacement			
PS PSP	8 53-	pan-head screw with spring washer	binding-head (B) screw and spring washer for replace- ment			
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement			
R	₽	round-head screw	binding-head (B) screw for replacement			
K	Þ	flat-countersunk-head screw				
RK	€⊃	oval-countersunk-head screw				
В	₽	binding-head screw				
Т	₽	truss-head screw	binding-head (B) screw for replacement			
F	₽	flat-fillister-head screw				
RF	€⊡	fillister-head screw				
BV	€⊒-	brazier-head screw				

Nut, Washer, Retaining ring:	
N 3	Diameter of usable screw or shaft
	Reference designation

Reference Designation	Shape	Description	Remarks				
		SELF-TAPPING SCRE	ws				
TA	(H)	self-tapping screw	ex: TA, P 3 x 10				
PTP	=	pan-head self-tapping screw	binding-head self- tapping (TA, B) screw for replacement				
РТРШН	#	pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement				
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement				
	,	SET SCREWS					
sc —		set screw					
SC	-⊚€∃-	hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket				
·		NUT					
N	-[]-(-(-)-(-)-(-)-(-)-(-)-(-)-(-)-(-)-(-)-	nut					
		WASHERS					
W	0	flat washer					
SW		spring washer					
LW	0	internal-tooth lock washer	ex: LW3, internal				
LW 🔘		external-tooth lock washer	ex: LW3, external				
		RETAINING RINGS	•				
E	6	retaining ring					
G	@	grip-type retaining ring					

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